General Directions

This test contains six sessions: three in reading and three in mathematics. The sessions are made up of multiple-choice questions and questions for which you must show your work or write out your answers. Write your answers to all of the questions in your Student Response Booklet. For the reading parts of the test, read each selection before answering the questions.

For each multiple-choice question, choose the best answer. Fill in the bubble in your Student Response Booklet that corresponds to your answer choice for that question.

Some questions ask you to show your work or to write out your answers. Write your answers to these questions in the spaces provided in your Student Response Booklet. Your answers must fit in the spaces provided. Any part of an answer outside the box might not be scored.

Be sure to answer all parts of each question, and to answer completely. For example, if a question asks you to explain your reasoning or show your work, be sure to do so. You can receive points for a partially correct answer, so try to answer every question.

© 2006 Measured Progress. All rights reserved.
No part of this book may be reproduced in whole or in part, stored in a retrieval system, or transmitted by any means without written permission from the publisher.
For information, contact Measured Progress, P.O. Box 1217, Dover, NH 03821-1217.
Printed in the United States of America.

Reading
Session 1

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

Not all plants and animals in the United States are native to this country. Read this article about alien species, and then answer the questions that follow.

Alien Invaders

Kathiann M. Kowalski

Americans first saw kudzu at the 1876 Centennial Exposition. The Exposition was a huge fair. Countries from around the world set up exhibits. Visitors loved the kudzu vine's lavender-blue flowers and its sweet grape-like scent at the Japanese pavilion.

Soon kudzu seemed to be everywhere. People bought the vines for their homes. Farmers fed it to livestock. The Soil Conservation Service told people to use it to prevent erosion—the washing away of soil by water.

Kudzu had fewer natural enemies in America than it did in Japan, and it adapted amazingly well to its new home. Now kudzu covers more than 2 million acres in the South. Each plant grows up to 100 feet (30 m) per year.

This is good for kudzu, but bad for other species. Invading kudzu uses resources that native species need to survive. And vines can quickly cover buildings, bridges, and even power lines. No wonder some people call kudzu "the vine that ate the South!"

Kudzu isn't the only alien invader. The Australian melaleuca tree made itself right at home in Florida's Everglades. The 70-foot (21 m) tall trees crowd out tall sawgrass in the marshes. Then wildlife that depends on the sawgrass suffers too.

Tamarisk is a woody plant from areas around the Mediterranean Sea. Starting in the nineteenth century, people planted tamarisk in the southwestern United States to control erosion. Now spreading tamarisk has invaded many areas of White Sands National Monument in New Mexico. As tamarisk forms dense thickets, it soaks up water that native plants need.

Animals can be invaders too. In the 1980s, zebra mussels accidentally got a free ride to North America inside ship ballast. Ballast is water that a ship carries so it floats at the right level. The zebra mussels made their way to the Great Lakes. With few natural enemies, they grew on every hard surface they could find, including pipes, boats, and docks. By 1995, people had spent over $120 million responding to the damage.

In July 1998, Asian longhorned beetles invaded Chicago, Illinois. By August 1999, the white and black bugs besieged areas in New York City and Long Island.

Larvae (young beetles) eat through tree trunks and branches. The holes keep water from flowing through the tree. The tree dies, and then the beetles infest another tree. No one knows where the invasion might spread next.

Not all foreign species are bad. Soybeans, wheat, and cattle were not native to the United States. They now play a major role in American agriculture.

Many popular garden plants were also brought to North America from other countries. Colorful

Please go on to the next page.

spring tulips, for example, first came from Europe and Asia. Daffodils first grew near the Mediterranean Sea.

But people can't always predict the future. What seems pretty today could well become the kudzu weed of tomorrow.

After habitat destruction, The Nature Conservancy says the next biggest threat to species survival comes from non-native species. The federal government is developing a plan to address problems from non-native species. Even if they're not from outer space, alien invaders are a real problem.

Mark your answers to questions 1 through 5 in the section marked "Reading—Session 1" in your Student Response Booklet.

1. In this article, alien is used to mean
   A. aggressive.
   B. foreign.
   C. endangered.
   D. poisonous.

2. Why is kudzu called "the vine that ate the South"?
   A. The vine helps prevent erosion.
   B. Animal species feed on kudzu.
   C. Kudzu has become a popular crop.
   D. The vine grows over whatever it is near.

3. The **main** purpose of paragraphs 10 and 11 is to
   A. provide a different view of alien plant and animal species.
   B. clarify the role of some major crops in American agriculture.
   C. trace the history of popular garden plants in North America.
   D. summarize the problems caused by alien animal species.

4. Which sentence from the article states an **opinion**?
   A. "Invading kudzu uses resources that native species need to survive."
   B. "Tamarisk is a woody plant from areas around the Mediterranean Sea."
   C. "Soybeans, wheat, and cattle were not native to the United States."
   D. "What seems pretty today could well become the kudzu weed of tomorrow."

5. Which source will probably contain the **most** complete information about preventing future problems caused by alien species in America?
   A. a Web site sponsored by the U.S. Environmental Protection Agency
   B. a guidebook titled *Native Southern Plant and Animal Species*
   C. a science book chapter about plants and animals of the Everglades
   D. a newspaper article titled "Saving Endangered Plants and Animals"

Please go on to the next page.

Sand painting is a traditional Navajo art form. Read this article about how to make a Navajo sand painting, and then answer the questions that follow.

Creating a Sand Painting

Every culture expresses itself through its own unique art forms. Its artists use materials from the world around them and ideas inspired by their culture's history and beliefs.

The Navajo (or *Dineh)* people of the American Southwest desert lands use colored sand to create beautiful paintings. Sand paintings are traditionally used in Navajo healing ceremonies for the sick.
2 A sand painting is usually created in a hogan, or dwelling, using symbols of spiritual significance. At the end of the ceremony, the painting is destroyed and the sand is returned to the earth.

Some sand paintings are sold as art forms. These sand paintings are usually made with
3 a slight imperfection that protects the sacred symbols. They are normally abstract designs that have personal significance to the artist.

In this activity, you will create your own sand painting. Your painting may be as simple or as complex as you like. With help, younger students can enjoy this activity as well, while learning about one of the oldest art forms in North America.

Materials

- several empty plastic or glass containers with lids (one for each color you want to make, plus one for glue)
- powdered tempera paint or cold-water dyes
- sand
- paper towels
- newspaper
- pencils
- poster board
- white glue
- paintbrush
- water
- plastic spoons
- hair spray

Dyeing the Sand

1. Pour sand into a jar, filling it halfway.
2. Add enough water to cover the sand completely.
3. Add dye or tempera paint to the mixture. The more coloring you add, the deeper (darker) the color will be.
4. Put the lid on and shake.
5. Repeat this process for each color you wish to use.
6. Drain the water out and spread the sand on paper towels to dry. Keep each color separate.

Creating Your Painting

1. First, on the poster board, draw your design in pencil. It may be best to keep your design simple on your first attempt. In each section of your finished design, lightly write the color of the sand that you intend to apply.
2. Pour some glue into an empty container. Add a few drops of water to the glue to make it thin and spreadable. Be careful, though! If you add too much water, your sand will not stick. Use the plastic spoon to mix the glue with the water.
3. Lay the poster board on a spread-out sheet of newspaper.
4. Use the paintbrush to apply the glue mixture to your poster board. Work with only one color at a time by applying the glue to all of the sections that will be of that color.
5. Sprinkle sand over the freshly spread glue mixture. Sprinkle enough sand to cover the glue completely.
6. Wait a few minutes, then carefully pour the excess sand off the poster board and onto the newspaper. This sand can be discarded or used later.
7. Continue steps 4 through 6 with the remaining sections and colors.

Please go on to the next page.

8. To give each section a heavy outline, trace the edges of the colored areas with glue, then sprinkle with the desired color of sand. This will help each color in the design stand out and will give your painting a sharper appearance.
9. When your painting is complete and all the glue has dried, spray it with the hair spray to "fix" it in place.

Variations

Other materials can be used to create paintings with varied textures. Try using crushed chalk or rock, for example. What else could you use? What would happen if you used a combination of materials?

You can use this technique on other objects to create beautiful decorations or gifts. For example, you can decorate old vases, jewelry boxes, or candle holders. The only limit is your imagination!

Mark your answers to questions 6 through 10 in the section marked "Reading—Session 1" in your Student Response Booklet.

6. Why does the article begin with a description of Navajo sand painting?
   A. to give the history of Navajo art forms
   B. to describe the most sacred Navajo designs
   C. to tell the reader how to make Navajo sand paintings
   D. to provide background information about Navajo sand painting

7. In paragraph 2, the word <u>significance</u> means
   A. creativity.
   B. energy.
   C. importance.
   D. inspiration.

8. For which purpose does the author recommend using hair spray?
   A. to make the poster board rigid
   B. to help keep the sand in position
   C. to brighten the colors of the sand
   D. to protect the glue from moisture

9. According to the directions under "Dyeing the Sand," the sand can be made darker by
   A. shaking the sand in the container.
   B. adding more paint to the sand.
   C. giving the sand more time to dry.
   D. pouring water into the sand mixture.

10. Which section of the article tells how to mix the colors for this project?
   A. "Materials"
   B. "Dyeing the Sand"
   C. "Creating Your Painting"
   D. "Variations"

Please go on to the next page.

Albert Einstein is one of the most well-known scientists of all time. Read this story about Albert Einstein's trip aboard the sailboat Fleet Felix*, and then answer the questions that follow.*

The Day I Rescued Albert Einstein's Compass

Shulamith Levey Oppenheim

IF YOU ARE lucky, something special will happen to you in your life that you will never forget. Something so special, you know it could have happened only to you. For me, it was the day I rescued Albert Einstein's compass.

It was Sunday morning. As I came downstairs I heard someone playing the violin. The living room doors were slightly ajar. My mother and father were waiting for me.

My father said to me, "Do you remember, Theo, about five years ago, when you were seven years old and you met our dear friend Herr Professor Einstein? I told you then that he was the most famous man alive."

"Yes, I do, Papa," I said. "And I asked you why he was the most famous man alive, and you said because he is a great physicist who has made important discoveries." I looked at my father. "Is he *here*, Papa?"

My father nodded. "Yes, he is here. He is playing the violin."

Suddenly the doors to the living room flew open, and a deep voice said with a chuckle, "The last time I was here, your father assured you that I did not bite. And as your father and I have been close friends for many years, he knows that I still do not bite." And he chuckled even louder.

I looked up. There was the thick, black mustache and the large head with gray-black hair bushing out all around. There were the eyes, dark and merry. He hadn't changed, although he seemed much less formidable than he had five years ago. Perhaps because I was older now.

Herr Einstein laid his violin at the side of the piano. "Now, young man, let us get immediately to business. Your parents tell me that you have a sailboat. I, too, have loved sailing all my life. Will you take me out in your boat? It is a most beautiful day."

I looked at my parents. Take the most famous man alive sailing in my sailboat! My neck and cheeks felt hot. My mother looked very pleased. "Our guest is an experienced sailor, and so are you. We think it would be lovely for the two of you to go out on the lake. It will be something you'll always remember."

And the most famous man alive put his hand on my shoulder. "Then let us be off."

. . .

We put on the orange life jackets I kept in a giant tin drum by the end of the pier. Then I stepped into the boat. My crew of one untied the rope, coiled it up, and came aboard. He took over the tiller, and I held the sheet.

We were off! There was an easy breeze. We followed the shoreline. The clouds were pink cotton puffs, and the sky was as blue as my mother's eyes.

I decided that this was a perfect time to ask my question. I'd been thinking about it ever since I walked into the living room. I took a deep breath.

"Yes?" asked Herr Professor Einstein.

Of course, he would know I was going to ask a question. He was the most famous man alive!

I asked my question slowly. "Why did you want to be a physicist?"

He didn't answer my question. Instead, he put his hand into his pocket. "It has fallen through a hole in the lining!" And he threw back his great head and laughed and laughed. What? The greatest man alive had a hole in his pocket! I was glad it made him laugh, but I didn't quite understand.

"Excuse me, Herr Professor, but what has fallen through a hole in your pocket?" I asked politely.

"The answer to your question. That is what has fallen through the hole! *Himmel!* Heavens! I think it is somewhere under the pocket now . . . one minute, one minute, I must tear the lining . . . a little more . . . a little more . . . There! Now I shall fish it out, only it won't be a fish but . . ." By this time, I was laughing, too. He drew out his hand. Between his fingers was a compass!

Please go on to the next page.

"Now I'll tell you a story," said my friend softly.

I looked up at the sky. Two red-tailed hawks were riding the warm air currents—the thermals. *Fleet Felix* was catching the breeze perfectly. My friend's voice was very low.

"When I was five years old, I was quite ill. I had to stay in bed for many days. My father gave me this compass." He peered at me. "You know what a compass is for, of course?" I nodded. "Good." He continued, "It was the first compass I had ever seen. There was the needle, under glass, all alone, pointing north no matter which way I turned the compass. To a five-year-old boy, it seemed like magic. Only it wasn't magic at all. Of course you know why."

. . .

At that moment a large motorboat zoomed past us, stirring up the water into high waves. One of them hit *Fleet Felix* smack against the side, knocking the compass from the professor's hand, right into the water!

He stared at his empty palm. "The compass, Theo. It is gone! Overboard?" Suddenly there was so much sadness in his eyes. "I should hate to lose it. And I cannot swim very well . . . and my eyesight is not good . . ." His voice trailed off, and he was looking far into space.

But *I* could swim! In a split second I dropped anchor into the water to keep the boat in place. I pulled off my life jacket. The waves had quieted down now. The compass would float. If I were lucky.

I jumped into the water.

My parents were sure I'd been a fish before I was a boy. Now was my chance to prove it! First, I swam round and round the boat. Then I dove under, searching beneath the hull once, twice, three times, staying under as long as my breath held.

Then I started swimming farther away from the boat. Under and under and round and round. No compass. I had to find it! Herr Professor Einstein might be the most famous man alive right now, but he was once five years old, and his father had given him a compass that he had treasured all these years. I thought about the splendid binoculars my parents had given me and how I would feel if I lost them.

I made another dive under the boat. As I came up for air, I felt something ever so gently hit my cheek. It was the compass, bobbing alongside *Fleet Felix,* just waiting to be rescued! Clutching it in my left hand, I grabbed hold of the boat with my right. Professor Einstein's eyes were closed.

"Pardon me," I called to him. "Pardon me, here is your compass!" And I clambered aboard.

He opened his eyes. "So," he said with a smile, "this is why I became a physicist," continuing just as if nothing had happened. "As you know, a physicist studies the forces in nature that we cannot know directly, only we know they are there from what we observe, like the compass needle or . . . ," he paused.

"Or gravity?" I offered, a bit tentatively.

"Bravo, young man. Or gravity. All these forces keep our planet running quite smoothly most of the time. And thank you, dear Theo. For me, you are the most famous boy alive!"

His eyes were merry again. I was still trying to catch my breath, but I had to ask another question. "Would you say it is because of the compass that you are now the most famous man alive?"

He sat very still. "The compass was my first mystery, and all my life I have worked to solve mysteries." He put the compass in his pocket—the one with the hole in it. "And I am *not* the most famous man alive, no matter what your dear father says. But you are surely the bravest and kindest boy I know."

Please go on to the next page.

Mark your answers to questions 11 through 21 in the section marked "Reading—Session 1" in your Student Response Booklet.

11. The first paragraph suggests that the narrator will tell about a day that was

    A. educational.
    B. unusual.
    C. frightening.
    D. amusing.

12. How does Einstein first behave when he meets Theo again after five years?

    A. He is shocked by Theo's growth and maturity.
    B. He acts serious because he wants to teach physics to Theo.
    C. He seems amused because Theo was once afraid of him.
    D. He is excited by the idea of sailing with Theo.

13. In paragraph 7, Einstein seems **less** formidable to Theo. This means that Theo now thinks Einstein is

    A. approachable.
    B. humorous.
    C. intelligent.
    D. talented.

14. In paragraph 17, Einstein does not answer Theo's question because he

    A. has a difficult time hearing Theo.
    B. is upset by the hole in his pocket.
    C. is unsure about how to answer Theo.
    D. would rather demonstrate his response.

Use the dictionary entry below to answer question 15.

> **fish** *vt* **1.** to catch or try to catch fish in: *to fish a stream* **2.** to catch or try to catch: *to fish for trout* **3.** to search for and bring to the surface: *to fish a ring out of a drain* **4.** to fish out or exhaust the supply of: *to fish out a lake*

15. In paragraph 19, which definition of fish is used in Einstein's statement, "Now I shall fish it out"?

    A. definition 1
    B. definition 2
    C. definition 3
    D. definition 4

Please go on to the next page.

16. When Einstein was a boy, why did his compass seem like magic?

A. His father had given it to him.
B. It helped him find answers to his questions.
C. His illness disappeared when he held the compass.
D. The needle always pointed north.

17. Why is Theo confident about his ability to swim to find the compass?

A. His parents always considered him a good swimmer.
B. He thinks the compass will float.
C. He remembers that the water is shallow.
D. His parents had given him swimming lessons.

18. According to the story, Einstein became a physicist because he enjoys

A. riding in sailboats.
B. playing the violin.
C. studying forces in nature.
D. making great discoveries.

19. Several times throughout the story, Einstein is referred to as "the most famous man alive" to show the reader that Einstein

A. expects Theo's family to address him this way.
B. thinks that being famous is very important.
C. hopes to always be remembered in this way.
D. is making a positive impression on Theo and his family.

20. How does Einstein behave at the end of the story?

A. cowardly
B. humble
C. tired
D. important

21. The events in this story are **mostly** organized

A. in order of occurrence.
B. through cause and effect.
C. in order of importance.
D. through comparison and contrast.

Please go on to the next page.

Write your answer to question 22 in the space provided for it in your Student Response Booklet.

22. Explain how Theo feels about being in the company of the "most famous man alive." Use details from throughout the story to support your answer.

Please STOP. Do not go on to the next page.

NO TEST MATERIAL
ON THIS PAGE

Reading
Session 2

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

This article from the "Travel Montana" Web site describes an activity that many residents and visitors in Montana enjoy. Read the article and then answer the questions that follow.

Tips for Spotting Wildlife
(Use More than Your Eyes)

Sometimes, it seems to work like Murphy's law: when you least expect it, you'll see wildlife. If you're trying to catch a photo of an elk, you can be sure one will lumber out of the brush the moment you set down your camera. So the best advice (as any Boy Scout will tell you) is: be prepared. Decide ahead of time where and when you will go; know the area you're visiting, and the best times to see animals. Try this checklist to give yourself the best chance to see wildlife in its natural habitat:

- Take a map. A map will generally tell you how easy or difficult an area is to get to, and what services are available. Where can you find good area maps? Start with the Forest Service or the Bureau of Land Management. Even if you're using a state highway map, look closely to find wildlife refuges and other areas set aside for wildlife preservation.
- Take a field guide. No, we're not talking about Sacajawea (although a knowledgeable local expert will always add to the experience). Try a good book that will help you identify species, habitat, what they eat and what their tracks look like. Hey, if you miss seeing the animal in person, tracks will at least let you know you're in the right area.
- Visit when the animals are most active. You know that old saying that goes "fish when the fish are biting"? Well, if you want to watch wildlife, you need to watch when the animals are on the move. The best times of day for most wildlife viewing are dawn and dusk, so plan to get up early or go to bed late if you want to catch the best viewing opportunities. Animals usually are less active during the heat of the day (aren't you?). Seasonal changes also affect animal behavior; some species are more active at certain times of the year. For example, fall migration is the best time to watch waterfowl. Of course, if you have a good field guide (hint, hint; see above), it can tell you the best times of year to see particular animals.
- Bring your glasses. By this we mean field glasses: binoculars or a spotting scope. You'll be able to watch at a safe distance. If you like, bring a camera to take the experience home with you in photos. Try to move quietly and slowly, to blend in as much as possible. Be patient, and remember you are a visitor to the animal's home.

Tips That Click: Wildlife Photography

Wildlife photography can be one of the most challenging and satisfying aspects of wildlife watching; your prize for hunting the animal of your choice is a beautiful snapshot. However, it can be more difficult than you might imagine at first. For starters, animals can be even worse subjects than young children: they're not apt to stand

Please go on to the next page.

still and pose while you figure out the best aperture and shutter speed. So, always be ready. Again, don't try to get too close to the animals; rely on your camera lens to bring them in close. Other tips include:

- Use at least a 400 mm lens. This will let you keep a respectful distance, and give you enough power to get a rich, detailed shot of the wildlife.
- Keep the sun at your back. If the sun is behind the animal, you'll tend to get a silhouette shot; the sun will backlight your subject, and you'll end up with a dark figure without detail.
- Photograph in the afternoon. This is when the light is best for photography.
- Don't fill the frame. You may be tempted to go for a full-frame profile of the animal, but don't. Try to feature wildlife within its natural surroundings for a more interesting photograph.

Mark your answers to questions 23 through 27 in the section marked "Reading—Session 2" in your Student Response Booklet.

23. If you want to take good photos of animals, which advice does the article say is **most** important?
    A. Get the best equipment that money can buy.
    B. Concentrate on photographing one particular species.
    C. Prepare for the photo expedition carefully in advance.
    D. Learn about hunting game, as there are many similarities.

24. According to the article, the **main** reason for taking a field guide is to
    A. learn a lot from an experienced native of the area.
    B. find your way out of an area by using the maps.
    C. help you take a better photograph of the animal.
    D. find out if you are near a particular animal's habitat.

25. In the section "Tips that Click," the author compares children with animals to make the point that photographers
    A. must keep their cameras prepared to shoot quickly.
    B. might win a prize if they get a beautiful photo of either.
    C. should not expect to get good photos of the two together.
    D. should be close to the subject to get good photos.

Please go on to the next page.

26. The **main** purpose of the article is to

A. help the reader become a professional photographer.

B. convince the reader to take up a new hobby.

C. amuse the reader by using humor.

D. share information with the reader.

27. In which source would you find the **most complete** information on photographing wildlife?

A. in a magazine called *Photography Today*

B. in a book titled *A Guide to Wilderness Photography*

C. in a store that sells wilderness hiking and camping equipment

D. in a magazine article titled "I Love Animals"

Please go on to the next page.

In this story, Rattlesnake and Rabbit rely on Coyote to settle their dispute. Read the story and then answer the questions that follow.

Judge Coyote

Sharon Creeden

One day, Rattlesnake was basking in the sun at the foot of a tall mountain. While he lay sleeping, a great stone came loose high on the mountainside, came rolling down, and landed right on top of Rattlesnake.

Rattlesnake twisted and he fought, but he could not get out from under the rock. "Help!" he called. "Help!"

He remained a prisoner for a l-o-n-g time. "No one will rescue me and I will die of heat and hunger and thirst," he thought.

Suddenly along came Rabbit.

"Greetings, Señor Snake," said Rabbit, "I see you are trying to crawl under that stone."

"Please don't tease me, Señor Rabbit," begged the Rattlesnake in a pitiful voice. "I am in terrible pain. Please roll this stone off of me, and I will see that you are well rewarded."

Rabbit knew the Rattlesnake was no friend, but he was a kind fellow and hated to see even his worst enemy in pain. "Very well," he said, and began immediately to push against the stone, first on one side and then on the other. Finally, after much pushing and prying by Rabbit, the heavy stone rolled away. Rattlesnake was free.

"Now," said the Rattlesnake, "for your reward— "

"Never mind," said the Rabbit, backing away. "Helping you was reward enough."

The Snake said, "I insist on a reward. For your help, you have the privilege of being my dinner."

"No, no! Do not eat me, Señor Snake!" cried the Rabbit, who was backed up against the mountain.

"Si, si!" said the Snake, following the Rabbit and keeping his snake eyes fixed firmly upon him. "You must have your reward, and I must have my dinner."

At this very moment, and just in the nick of time, Coyote appeared.

"What goes on here?" he demanded. Both the Rabbit and the Snake began talking at the same time. "Señor Snake is trying to eat me," said Rabbit. "Señor Rabbit tried to kill me," protested Rattlesnake. "Someone is not telling the truth," declared Coyote. Rabbit and Rattlesnake were willing for Señor Coyote to act as judge and settle the dispute.

Rabbit said, "I came here and found Señor Snake under this stone. I pushed it off him and he promised me a reward. But I ask no reward; all I want is my life. He wants to eat me up. That is to be my reward. Is that fair?"

"Completely untrue," the Snake responded. "What Señor Rabbit says is not what happened. I was sleeping in the sun at the foot of this mountain. He pushed the stone on me and was leaving me to die. I escaped and now, I have the right to eat him. Isn't that fair?"

Judge Coyote thought and thought. He looked first to the Rabbit and then to the Snake. "Let us see. Friends, we must settle this matter correctly. Now, both of you are agreed that Señor Snake was under the stone. Is it not so?"

"Si," said the Rattlesnake.

"Si," said the Rabbit. "That is so."

Coyote continued, "I must know now just how everything was. Señor Snake, will you please move over here next to the stone, and Señor Rabbit and I will roll it back on top of you. Then, I can decide this dispute correctly."

The snake agreed, and moved next to the stone. Rabbit and Coyote rolled the stone back upon the snake's back. "Ouch!" said Rattlesnake.

"Now," said Coyote, "is that the way you were, Señor Snake?"

"Yes, this is the way I was," the Rattlesnake said, squirming in discomfort.

"Can you get out?" asked Coyote.

Please go on to the next page.

"No," said Rattlesnake.

"Are you sure you can't get out?" asked Coyote again.

"I'm sure I can't get out!" said Rattlesnake.

"And that is the way you will stay," said Judge Coyote. "You are the great villain of the animalitos. I know you are lying, because I never heard of a rabbit trying to kill a snake. But I often heard of a snake trying to eat a rabbit. Now you have your reward for trying to eat Señor Rabbit after he treated you with kindness." Coyote and Rabbit walked away and left Rattlesnake under the rock. For all I know, he may be there still.

Mark your answers to questions 28 through 32 in the section marked "Reading—Session 2" in your Student Response Booklet.

28. Paragraph 14 says that Señor Coyote would "settle the dispute." What does the word dispute mean?
    A. disgrace
    B. disaster
    C. disagreement
    D. disappointment

29. Coyote twice asked Rattlesnake if he was sure he could not get out because Coyote wanted to be sure that
    A. Rabbit was far away.
    B. Snake was not in pain.
    C. Snake heard him.
    D. Snake was punished.

30. The last paragraph of the story shows
    A. Rabbit's relief.
    B. Judge Coyote's reasoning.
    C. Rattlesnake's dismay.
    D. the characters' conflicts.

31. Which pair of words **best** describes Rabbit?
    A. cheerful and friendly
    B. helpful and caring
    C. casual and clumsy
    D. wise and understanding

32. The **main** purpose of the story is to
    A. teach a lesson.
    B. explain a viewpoint.
    C. describe a scene.
    D. change an opinion.

Please go on to the next page.

Reading
Session 3

This test session includes reading selections, multiple-choice questions, and a question for which you must write out your answer. After you read each selection, answer the questions about it in the spaces provided in your Student Response Booklet. You may not use a dictionary or any other reference tool during this session.

These two poems have something to say about grandmothers. Read the poems, and then answer the questions that follow.

Lineage

My grandmothers were strong.
They followed plows and bent to toil.
They moved through fields sowing seed.
They touched earth and grain grew.
They were full of sturdiness and singing.
My grandmothers were strong.

My grandmothers are full of memories
Smelling of soap and onions and wet clay
With veins rolling roughly over quick hands
They have many clean words to say.
My grandmothers were strong.
Why am I not as they?

—Margaret Walker Alexander

Grandmother

Grandmother was strong, like a distant mesa.
From her sprang many stories of days long ago.
From her gentle manners
lessons were learned
not easily forgotten.
She told us time and again
that the earth is our mother,
our holy mother.

"Always greet the coming day
by greeting your grandparents,
Yá'át'ééh Shi cheii (Hello, My Grandfather)
to the young juniper tree.
Yá'át'ééh Shi másání (Hello, My Grandmother)
to the young piñon tree."

The lines in her face were marks of honor,
countless winters gazing into the blizzard,
many summers in the hot cornfield.
Her strong brown hands, once smooth,
carried many generations,
gestured many stories,
wiped away many tears.
The whiteness of her windblown hair,
a halo against the setting sun.

My grandmother was called Asdzán Ałts' íísí,
Small Woman. Wife of Little Hat,
mother of generations of Bitter Water Clan,
she lived 113 years.

— Shonto Begay

Please go on to the next page.

Mark your answers to questions 46 through 50 in the section marked "Reading—Session 3" in your Student Response Booklet.

46. Which word **best** describes the speaker's feelings about the grandmothers described in "Lineage"?
    A. confused
    B. fearful
    C. loving
    D. admiring

47. In line 15 of "Grandmother," the "marks of honor" represent
    A. effects of pain.
    B. years of labor.
    C. tears of sorrow.
    D. times of confusion.

48. The comparison in lines 22 and 23 of "Grandmother" symbolizes her
    A. high intelligence.
    B. deserved respect.
    C. brave actions.
    D. great ambition.

49. Which line from "Grandmother" contains a simile?
    A. "Grandmother was strong, like a distant mesa."
    B. "From her sprang many stories of days long ago."
    C. "Her strong brown hands, once smooth,"
    D. "The whiteness of her windblown hair,"

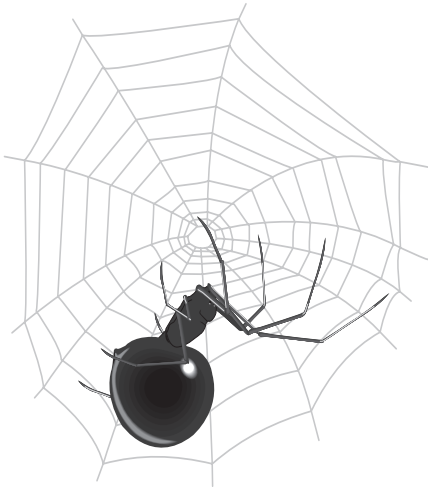
50. "Grandmother" is different from "Lineage" because "Grandmother"
    A. describes a specific grandmother figure.
    B. suggests that physical strength is valuable.
    C. honors having a close relationship with the earth.
    D. stresses the importance of respecting grandmothers.

Please go on to the next page.

This story is a Wiyat legend about how Spider got its web. Read the story, and then answer the questions that follow.

How the Spider Got Its Web

A WIYAT LEGEND



The Wiyats (also spelled Wiyots) are a small tribe whose traditional lands are located in the Humboldt Bay area (along the northern coast of California) in the heart of the redwood forest. The Wiyats used these tall, red-barked trees to make canoes and build their homes. Most of their food came from the ocean: salmon, whales, and shellfish. They also gathered nuts and berries and hunted small game. The Wiyats are known for their exceptional basket weaving.

In the spider stories of the tribes of the Northwest Coast, the spider maintains a true spider form. Using their spider traits—web, small size, climbing ability—spiders aid the people and other animals.

In a time when the world was new, all the animals were well fed and content except Spider. Spider's belly growled with hunger, but he didn't know how to get food. He decided to ask Old Man Above for help.

Climbing a tall redwood that had poked a hole into sky country, Spider went to look for Old Man Above. Spider found him sitting on a tule-reed mat, twisting hair into string.

"I'm hungry," complained Spider. Old Man Above began winding the string into a ball.

"I don't have any way to catch food," continued Spider. "You gave Grizzly Bear sharp claws and powerful jaws. You gave Beaver long, strong teeth. You gave Red Fox quickness and cunning. But you made me small and weak. How am I to eat?"

Old Man Above peered down at the squeaky little creature. "Take this," he said, giving Spider the ball of string.

"A ball of string is neither teeth nor claws, quickness nor cunning," said Spider. "How will it feed me?"

"Just as Grizzly Bear learned to use his claws, Beaver learned to use his teeth, and Red Fox learned to use his quickness and cunning, you must learn to use your gift." Old Man Above rose to his feet. "Now go away and don't bother me again," he said, disappearing into the clouds.

Spider pulled his hair with his eight legs. "I came all this way and I'm no better off than I was before! What kind of gift is a ball of string?" Spider's stomach grumbled in answer. Angrily, he stuffed the string into his mouth.

When he had gobbled up the whole ball, Spider heaved a sigh. His belly was full and silent at last. He was ready to go home.

Spider searched all over sky country, but he
10 couldn't find the place where the redwood poked through the clouds.

Suddenly, the sky began to shake.

"It's Old Man Above!" cried Spider. "What will he do if he finds me still here?"

Spider cleared a spot in the clouds and peered down at the ground far below. "If I hadn't eaten the ball of string," he said, "I could use it to get down."

The clouds trembled as Old Man Above drew closer.

Gulping in fear, Spider felt the string tickling the back of his throat. Frantically, he spit out a bit of the string and tied it to the edge of the sky. As the string unraveled, Spider clung to it with all of his eight legs. He lowered himself to the ground and scampered home.

From then until now, every Spider carries the gift of string from Old Man Above. Using it to make a web, Spider catches his food and is never hungry.

Please go on to the next page.

Mark your answers to questions 51 through 55 in the section marked "Reading—Session 3" in your Student Response Booklet.

51. At the beginning of the story, Spider wants Old Man Above to give him
    A. the skills needed to spin a web.
    B. the strength of the other animals.
    C. a method of catching food on his own.
    D. an explanation as to why he cannot find food.

52. How does Spider **mostly** feel when he receives the ball of string?
    A. relieved
    B. frustrated
    C. grateful
    D. confused

53. Spider stuffs the ball of string into his mouth because he
    A. needs to satisfy his hunger.
    B. is angry at Old Man Above.
    C. can carry the string only in his mouth.
    D. thinks the ball of string is useless.

54. In paragraph 10, why is it important for Spider to find "the place where the redwood poked through the clouds"?
    A. He hopes the redwood tree will contain a special gift.
    B. He wants to visit Old Man Above at his home in the clouds.
    C. He needs the redwood tree so he can climb back to the ground.
    D. He thinks the place in the clouds will help him find food.

55. Another version of this story would **most likely** be found
    A. on an Internet Web site about spiders.
    B. on a videotape about modern legends.
    C. in a book of Native American literature.
    D. in a newspaper article about the Wiyats.

Please go on to the next page.

Margaret Bourke-White was an important twentieth-century photographer. Read this article about Margaret Bourke-White, and then answer the questions that follow.

Margaret Bourke-White, American Photographer
1904–1971

Early Years

Margaret White developed a love for learning and adventure at an early age. As a young girl growing up in New Jersey, she overcame her fear of the dark by playing outdoors at night with her mother. She explored nature with her father and came to love animals so much that once she rescued a baby robin that had fallen from its nest. The father robin trusted Margaret enough to feed his baby from the palm of her hand.

Margaret's parents believed in giving their young daughter experiences that were uncommon for girls at that time. Because of this, Margaret developed an adventurous spirit. With a passionate interest in science, she pictured herself bringing animals back from jungles for display in natural history museums. This was a dream that most women never considered.

1920s

When Margaret started college at Columbia University in 1921, she studied herpetology, a branch of science devoted to snakes and amphibians. She also nurtured her love of photography. As a child, she had helped her father develop film in the family bathtub. Her father had been an amateur photographer, often taking photos on the nature walks they enjoyed together.

As a college student, she used what she had learned from him to take photos of summer campers and of the college campus. She sold her photographs to students as a way to earn money.

She also enrolled in a photography class at the Clarence H. White School of Photography. Here she learned about photographic style. In 1926, she attended Cornell University to complete her college education. Her dream was to become famous and wealthy. Although she maintained her interest in science, she knew that fame for her would come from being a photographer.

1930s

After graduating from Cornell, Margaret moved to Cleveland. To seem more professional, she changed her last name to Bourke-White (Bourke was her mother's last name) and started the Bourke-White studio in her one-room apartment. She earned money photographing homes and gardens. At night and on weekends she visited the steel mills. When she was a girl, her father had taken her to visit a steel foundry. Here, she saw immense beauty in the melted steel and in the workings of the giant iron machines.

Her industrial photographs during this period won her a lot of attention. In addition to her great determination, Margaret Bourke-White had elegance and style. She was well on her way to becoming a famous photographer.

Self-Portrait with Camera

In 1929, Margaret was hired by the founder of *Fortune* to take photographs for this new magazine. Her assignments took her to many interesting places. In the 1930s, the Great Depression was in full swing in America, and her job was to capture it on film. She photographed

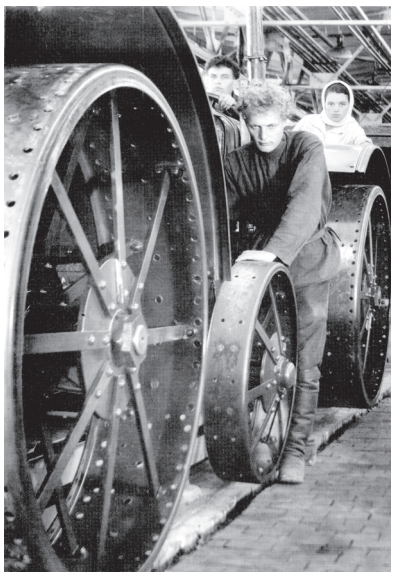
Please go on to the next page.

farmers and rural southerners. Through doing this, she developed a deeper interest in social issues.

She collaborated with Erskine Caldwell on a book titled *You Have Seen Their Faces,* which documented the lives of southern sharecroppers. This project became an important landmark in book publishing. This book was the first to use photos and text to carry a story. Also, in 1936, Margaret became a photographer for *Life*, the most popular magazine of the time.

The 1940s and Beyond

During the 1940s, while working for *Life* magazine, Margaret's work took her around the world to Russia and India to photograph the harsh working conditions of the citizens there, many of whom were children. In 1946, she traveled to South Africa to photograph life inside the coal mines. Her photographs brought to the world images and stories that would otherwise have remained hidden.



Tractor Factory, Russia

Margaret's career with *Life* lasted until 1957, when Parkinson's disease made it impossible for her to continue working. In her lifetime, she produced seven books on her own and three with Erskine Caldwell.

During the last seven years of her life, Margaret wrote her last book, an autobiography titled *Portrait of Myself*. She died at her home in Connecticut in 1971 at the age of 67.

Mark your answers to questions 56 through 66 in the section marked "Reading—Session 3" in your Student Response Booklet.

56. Margaret's interest in photography was probably **most** influenced by her
    A. love of science.
    B. desire to travel.
    C. relationship with her father.
    D. study at Columbia University.

57. How did Margaret's attitude toward photography change during her college years?
    A. She decided to focus on photography as a career.
    B. She hoped to be the first woman to photograph industry.
    C. She realized that she loved photography more than herpetology.
    D. She believed that photography was the best career for a woman.

Please go on to the next page.

58. Paragraph 7 states that Margaret had great determination. This means that Margaret had

A. talent.
B. courage.
C. intelligence.
D. motivation.

59. Paragraph 8 says, "In the 1930s, the Great Depression was in full swing in America." The phrase "in full swing" means that the Great Depression was

A. yet to begin.
B. at its most serious.
C. slowing down.
D. over and done with.

60. In paragraph 9, the word collaborated means that Margaret and Erskine Caldwell

A. traveled to the same locations.
B. worked together as a team.
C. applied to work for a publisher.
D. learned about life in the south.

61. Which statement from the article **best** explains Margaret's inspiration for the photograph *Tractor Factory*?

A. "She also enrolled in a photography class at the Clarence H. White School of Photography."
B. "Here she saw immense beauty in the melted steel and in the workings of the giant iron machines."
C. "In the 1930s, the Great Depression was in full swing in America, and her job was to capture it on film."
D. "Also, in 1936, Margaret became a photographer for *Life*, the most popular magazine of the time."

62. Margaret's career as a professional photographer required her to also be a

A. soldier.
B. teacher.
C. traveler.
D. publisher.

63. Which source is likely to contain the **most** information about Margaret Bourke-White?

A. an issue of *Life* magazine from the 1930s
B. a book titled *Great Photographers of the Twentieth Century*
C. the Cornell yearbook from the year Margaret graduated
D. a magazine titled *Modern Photography*

Please go on to the next page.

64. The author's **main** purpose in this article is to

A. describe photography during the 1900s.
B. encourage readers to study photography.
C. explain how to become a famous photographer.
D. show one person's contributions to photography.

65. Which statement from the article **best** describes the significance of Margaret Bourke-White's career as a photographer?

A. "Her dream was to become famous and wealthy."
B. "Her industrial photographs during this period won her a lot of attention."
C. "Her assignments took her to many interesting places."
D. "Her photographs brought to the world images and stories that would otherwise have remained hidden."

66. The information and events in this article are organized **mostly**

A. in chronological order.
B. through cause and effect.
C. in order of importance.
D. through comparison and contrast.

Write your answer to question 67 in the space provided for it in your Student Response Booklet.

67. Explain how **two** experiences from Margaret's youth influenced her work as a photographer. Support your explanation with details and examples from the article.

Please STOP. Do not go on to the next page. STOP

Mathematics
Session 1 (Calculator)

This test session includes multiple-choice questions and a question for which you must show your work or write out your answer. You may use a calculator during this session.

Mark your answers to questions 1 through 24 in the section marked "Mathematics—Session 1 (Calculator)" in your Student Response Booklet.

1. Candice made the chart below to show her parents how she plans to save for a new skateboard that costs $110.

Month	Balance
Now	$ 38.00
1	$ 46.00
2	$ 54.00
3	$ 62.00
4	$ 70.00
5	$ 78.00
6	$ 86.00
7	$ 94.00
8	$102.00
9	$110.00

How can Candice explain her plan in words?

A. "I have $38 and plan to save $7 each month."

B. "I have $38 and plan to save $8 each month."

C. "I have $38 and plan to save $10 each month."

D. "I have $38 and plan to save $12 each month."

2. For his first four games, Allen had an average score of 131. For his fifth game, he had a score of 141. What was his average score for the five games?

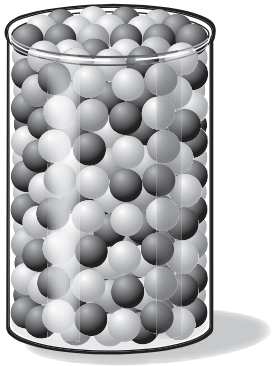
A. 133

B. 134

C. 135

D. 136

3. Ben must guess the number of gum balls in the jar shown below.



Ben estimates that the jar has a diameter of 6 gum balls and a height of 9 gum balls. Based on Ben's estimates, about how many gum balls are in the jar?

A. 50 gumballs

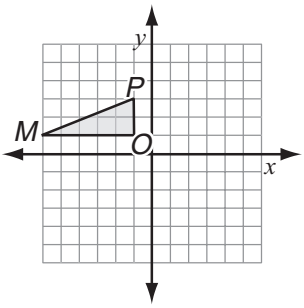
B. 150 gumballs

C. 250 gumballs

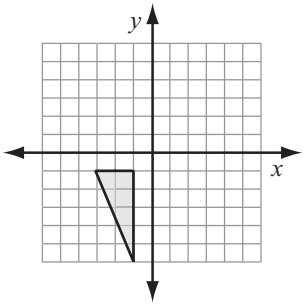
D. 1000 gumballs

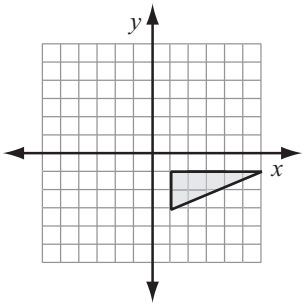
Please go on to the next page.

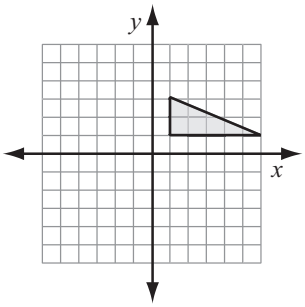
Use the graph below to answer question 4.

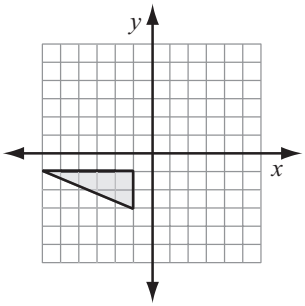


4. Which graph shows the image of triangle *MOP* after it is reflected across the *x*-axis?

A.


B.


C.


D.


5. The speed limit has increased on the highway to Jill's grandmother's house. It used to take Jill $3\frac{1}{2}$ hours to get there driving at an average speed of 60 miles per hour. How much **less** time will it take Jill to get to her grandmother's house driving at an average speed of 70 miles per hour?

A. 10 minutes less
B. 20 minutes less
C. 30 minutes less
D. 35 minutes less

6. Scientists use this formula to convert Fahrenheit, *F*, to Celsius, *C*.

$$C = \frac{5}{9}(F - 32)$$

To the nearest degree, how many degrees Celsius is 132°F?

A. 56°C
B. 91°C
C. 180°C
D. 295°C

Please go on to the next page.

7. A chef bought a circular cardboard cake round to go under the bottom layer of a wedding cake. The cake round has a diameter of 16 inches. He wants to wrap a ribbon around the edge of the cake round to cover up the cardboard. About how much ribbon does he need?

A. 25 inches
B. 50 inches
C. 200 inches
D. 800 inches

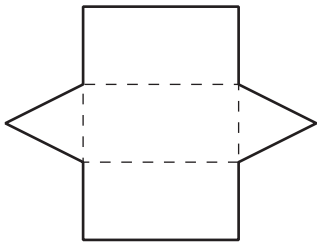
8. Annie is sending a 25-pound package to France. Which amount is closest to the mass of the package in kilograms?

A. 0.1 kilogram
B. 1 kilogram
C. 10 kilograms
D. 100 kilograms

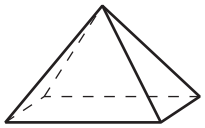
9. The monthly bill for Josie's cell phone is \$45.00 plus \$0.15 for each minute used over 200 minutes. One month, she used her phone for 500 minutes. What was her bill that month?

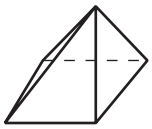
A. \$45.00
B. \$45.45
C. \$49.50
D. \$90.00

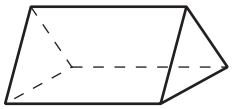
10. The pattern shown below can be folded along the dotted lines to form a three-dimensional shape.

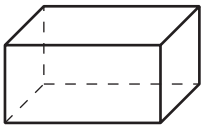


Which shape will result from the pattern being folded?

A. 

B. 

C. 

D. 

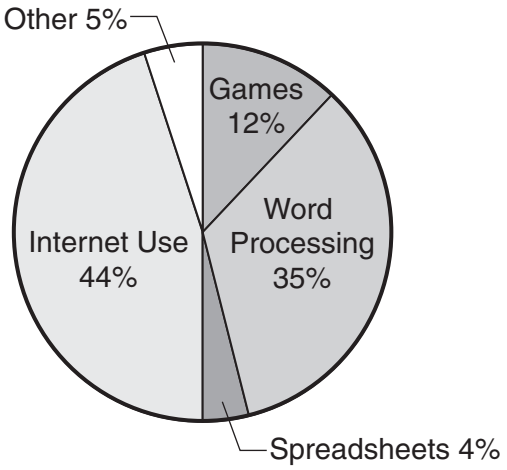
11. A group of volunteers is packing 60 bags of groceries for the victims of a flood. Each bag will be packed with 12 cans and 6 packages of food. Which expression shows the total number of items that will be packed by the volunteers?

A. $60(12+6)$
B. $60+12+6$
C. $60\times12\times6$
D. $12+6\times60$

Please go on to the next page.

12. A computer company surveyed customers about the main use of their computer. The results are shown below.

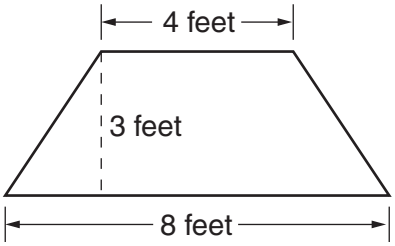
Main Computer Use



The computer company surveyed 200 customers. How many customers said that their main use of the computer is to make spreadsheets?

A. 4 customers
B. 8 customers
C. 40 customers
D. 80 customers

13. Steve has been hired to lay tile in an entryway with the dimensions shown below.



What is the area of the entryway?

A. 14 square feet
B. 16 square feet
C. 18 square feet
D. 36 square feet

14. The 7th-grade representatives at a school are going to take a survey to decide whether to have a dance or an activity night. Which sample group will **best** represent the 7th-grade students at the school?

A. a random sample of 100 7th-grade students as they arrive for school
B. a random sample of 100 7th-grade students attending the football game
C. fifteen friends of each 7th-grade representative
D. the first 100 7th-grade students that sign up to complete the survey

Please go on to the next page.

15. Members of the band are selling candy bars to raise money. The director uses this equation to calculate the amount of profit, p, made from selling n candy bars.

$$p = 1.50n - 500$$

How many candy bars must be sold to make a profit of $700?

A. 134
B. 300
C. 800
D. 967

16. Myra's dad is making her a rocking chair similar to the miniature chair shown below.

Regular Size Chair

Miniature Chair

Not to Scale

The miniature chair is $\frac{1}{2}$ inch wide and $1\frac{1}{2}$ inches tall. If Myra's chair is 18 inches wide, how tall will it be?

A. 1.5 feet
B. 4.5 feet
C. 18 feet
D. 54 feet

17. Maurice is roasting a turkey for dinner. The chart below is on the turkey package.

Weight of Turkey	Time to Cook
10 pounds	2 hours 30 minutes
12 pounds	3 hours
14 pounds	3 hours 30 minutes
16 pounds	4 hours

How long will it take Maurice to roast a 25-pound turkey?

A. 5 hours 15 minutes
B. 5 hours 30 minutes
C. 6 hours 15 minutes
D. 6 hours 30 minutes

18. According to one source, students should follow these rules.

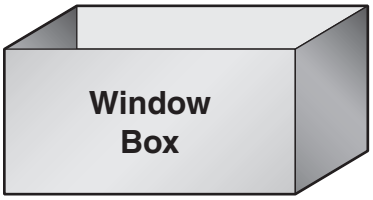
- Do not carry backpacks that weigh more than 15% of your body weight.
- Never carry backpacks that weigh over 25 pounds.

Latoya weighs 120 pounds. What is the maximum weight of the backpack she should carry?

A. 15 pounds
B. 18 pounds
C. 20 pounds
D. 25 pounds

Please go on to the next page.

19. Sam made the window box shown below.



He decided it was too small so he made a new one by doubling the old one's dimensions. How much **more** dirt will the new window box hold?

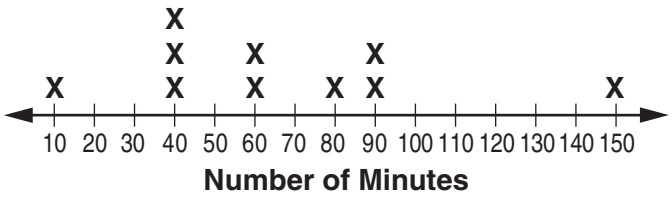
A. 2 times as much
B. 4 times as much
C. 6 times as much
D. 8 times as much

20. What is the least common multiple of 8 and 12?

A. 2
B. 4
C. 24
D. 96

21. Mr. Chavez asked his students about how long they use the Internet each day. The results of his survey are shown below.

Average Time Spent Daily on Internet



Based on these data, which statement is true?

A. The mode is 40.
B. The mean is about 40.
C. The range is 50.
D. The median is 80.

22. Jenny measured the sides of rectangle *ABCD* and rectangle *EFGH*. These were her results:

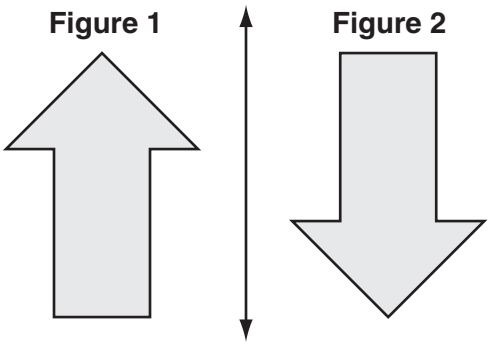
- In rectangle *ABCD*, $AB = CD = 6$ and $BC = AD = 2$.
- In rectangle *EFGH*, $EF = GH = 9$ and $FG = EH = 3$.

Which statement describes the relationship between rectangle *ABCD* and rectangle *EFGH*?

A. The rectangles are congruent only.
B. The rectangles are similar only.
C. The rectangles are both congruent and similar.
D. The rectangles are neither congruent nor similar.

Please go on to the next page.

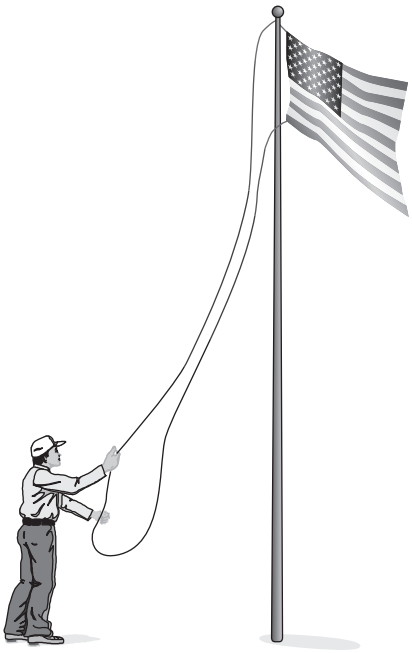
23. Figure 2 is the image of Figure 1.



Which statement describes the transformation?

A. Figure 1 was reflected across the line.
B. Figure 1 was translated across the line.
C. Figure 1 was reflected across the line and then translated downward.
D. Figure 1 was rotated 180 degrees and then reflected across the line.

24. The picture below shows Andre raising the flag.



Andre is approximately $5\frac{1}{2}$ feet tall. About how tall is the flagpole?

A. 10 feet
B. 15 feet
C. 20 feet
D. 25 feet

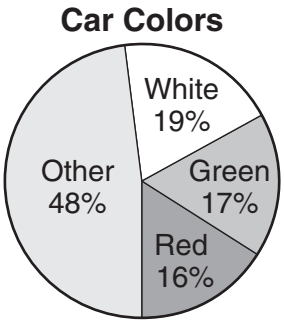
Please go on to the next page.

Write your answer to question 25 in the space provided for it in your Student Response Booklet. Show all of your work.

25. The manager of Standard Auto has been using the table below to keep track of the colors of cars his customers order. He made this graph to display the data.

Car Colors

Color	Percent of Customers
White	19%
Green	17%
Red	16%
Brown	10%
Black	6%
Silver	5%
Blue	13%



a. Describe one advantage and one disadvantage of the graph the manager made of the data.

b. On the grid in your Student Response Booklet, make a bar graph of the data in the table. Be sure to title your graph, label your axes, and show appropriate scale.

Please STOP. Do not go on to the next page. STOP

Mathematics
Session 2A (Calculator)

This test session includes multiple-choice questions and a question for which you must show your work or write out your answer. You may use a calculator during this session.

Mark your answers to questions 26 through 33 in the section marked "Mathematics—Session 2A (Calculator)" in your Student Response Booklet.

26. The cost, c, of a plaque is \$7.50 plus \$0.15 for each letter, l, that is engraved on the plaque. This is shown by the equation $c = 7.50 + 0.15l$. If a plaque costs \$12, how many letters were engraved on it?

    A. 30 letters
    B. 72 letters
    C. 80 letters
    D. 130 letters

27. A rectangular prism has these dimensions: 4 inches by 6 inches by 4 inches. Which statement about the faces of the prism is true?

    A. They are all squares.
    B. Two are squares, and four are rectangles that are not squares.
    C. Four are squares, and two are rectangles that are not squares.
    D. They are all rectangles that are not squares.

28. Van made the following pattern of squares using toothpicks.

He also made this table of the number of toothpicks needed to make each shape.

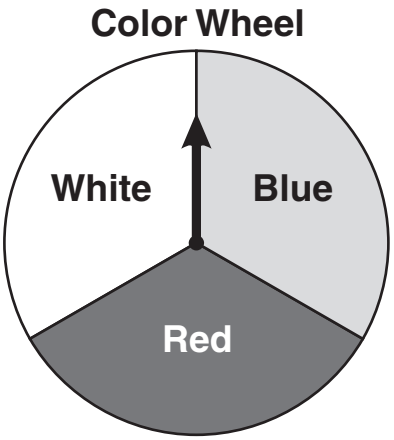
Squares	Toothpicks
1	4
2	7
3	10

Which expression shows the number of toothpicks Van needs for a shape with n squares?

A. $4n$
B. $n + 4$
C. $4n + 3$
D. $3n + 1$

Please go on to the next page.

29. At the Summer Carnival, each person gets a colored ticket (red, white, or blue). People who spin the color of their ticket on the color wheel win a free amusement ride.



The carnival manager expects 1800 people to come to the carnival. How many free amusement rides should the carnival manager expect to give away?

A. 200 rides
B. 300 rides
C. 600 rides
D. 900 rides

30. The chart below shows the members of the student council.

Grade	Boys	Girls
6	3	5
7	5	3
8	4	4

If one student council member is chosen at random to welcome new students, what is the probability that the person chosen will be a seventh-grade girl?

A. $\frac{1}{2}$

B. $\frac{1}{3}$

C. $\frac{1}{6}$

D. $\frac{1}{8}$

Please go on to the next page.

NO TEST MATERIAL
ON THIS PAGE

Mathematics
Session 2B (No Calculator)

This test session includes multiple-choice questions and questions for which you must show your work or write out your answer. You may NOT use a calculator during this session.

Mark your answers to questions 35 through 41 in the section marked "Mathematics—Session 2B (No Calculator)" in your Student Response Booklet.

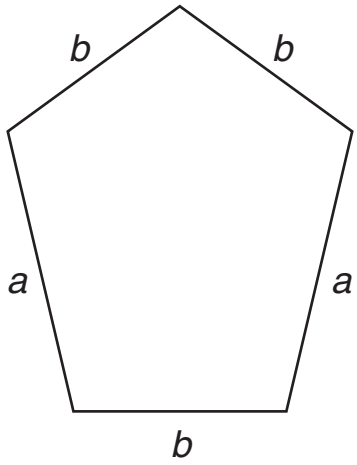
35. Kevin scored 48 points out of a possible 59 points on a test. Which of the following is the best estimate for the percent of questions he answered correctly?

    A. 50%
    B. 60%
    C. 66%
    D. 80%

36. An artist combines 2 ounces of red paint and 1 ounce of yellow paint to make orange paint. He needs 9 ounces of orange paint. How many ounces of yellow paint will he have to use?

    A. 3.0 ounces
    B. 4.5 ounces
    C. 6.0 ounces
    D. 7.5 ounces

37. Kent is planning a stained-glass window. He drew a plan and labeled the lengths of the sides as shown below.



All of the expressions below show the total length around the window except which one?

A. $2a + 3b$
B. $2(a + b)$
C. $2(a + b) + b$
D. $a + b + b + a + b$

Please go on to the next page.

Mathematics
Session 3 (No Calculator)

This test session includes multiple-choice questions and questions for which you must show your work or write out your answer. You may NOT use a calculator during this session.

Mark your answers to questions 44 through 64 in the section marked "Mathematics—Session 3 (No Calculator)" in your Student Response Booklet.

44. At the 2002 USA Outdoor Championships in June 2002, Gail Devers won the finals of the 100-meter hurdle with a time of 12.51 seconds. Joyce Bates placed eighth with a time of 13.14 seconds. What was the difference in the times of the two athletes?

    A. 0.63 seconds
    B. 1.63 seconds
    C. 25.65 seconds
    D. 63 seconds

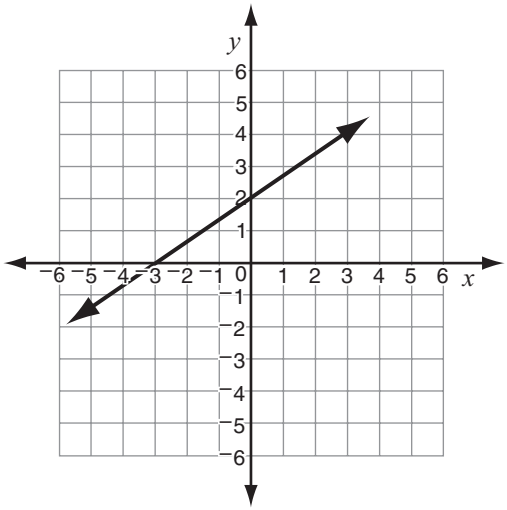
45. Greg made the table below to show the powers of 7.

Power	Value
7^0	1
7^1	7
7^2	49
7^3	343
7^4	2,401
7^5	16,807
7^6	117,649

What number is in the one's place of 7^{10}?

    A. 1
    B. 3
    C. 7
    D. 9

Use the graph below to answer question 46.



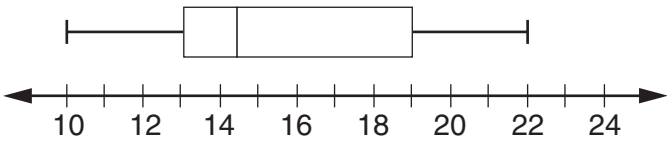
46. At what point does the line cross the x-axis?

    A. (–3, 0)
    B. (0, –3)
    C. (0, 2)
    D. (2, 0)

Please go on to the next page.

47. Andrew collected statistics about the shoe size of basketball players. He displayed his information in the box-and-whisker plot shown below.

Shoe Sizes of Basketball Players



Shoe Size

Based on the data shown, which statement **must** be true?

A. At least one player has a shoe size of $14\frac{1}{2}$.

B. At least one player has a shoe size of 21.

C. The number of players with a shoe size less than $14\frac{1}{2}$ is the same as the number of players with a shoe size greater than $14\frac{1}{2}$.

D. The number of players with a shoe size less than 13 is the same as the number of players with a shoe size greater than 18.

48. The table below shows the fat content of 1-pound packages of four different kinds of meat.

Fat Content of Four Different Kinds of Meat	
Meat	**Fat Content**
ham	$\frac{1}{8}$
hamburger	0.12
lamb	$\frac{1}{9}$
turkey breast	3%

Which package has the **lowest** fat content?

A. ham
B. hamburger
C. lamb
D. turkey breast

49. John left a 15% tip on a $74 bill. What is the total amount he paid for the bill and tip?

A. $74.15
B. $75.50
C. $85.10
D. $89.00

Please go on to the next page.

50. The formula $p = 5s$ can be used to find the perimeter, p, of a regular pentagon with a side length, s. Regular pentagon A has a side length twice as long as regular pentagon B. How do the perimeters compare?

A. The perimeter of pentagon A is 2 times the perimeter of pentagon B.

B. The perimeter of pentagon A is 4 times the perimeter of pentagon B.

C. The perimeter of pentagon A is 5 times the perimeter of pentagon B.

D. The perimeter of pentagon A is 10 times the perimeter of pentagon B.

51. A gross is 12^2. How many pencils are there in a gross of pencils?

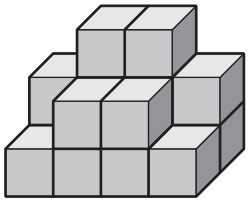
A. 24

B. 122

C. 144

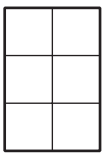
D. 1200

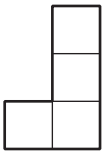
52. This picture shows the model of a building.

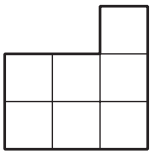


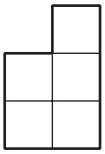
Front

Which drawing shows its right-side view?

A. 

B. 

C. 

D. 

Please go on to the next page.

53. Mark is planning a five-day vacation for his family of four.

- The hotel will cost $120 a night for 4 nights.
- A rental car will cost $25.00 a day for 5 days.
- Other expenses, such as food, are estimated at $100 per person.

What is the approximate total expense for their five-day vacation?

A. $1225
B. $1005
C. $ 545
D. $ 245

54. The time it takes to plow a field can be found by multiplying the width (in feet) of the plow by the speed (in miles per hour) that the tractor is moving and dividing the product by 10. Which equation should be used to find the time, t, it will take to plow a field when the plow is f feet wide and the tractor moves s miles per hour?

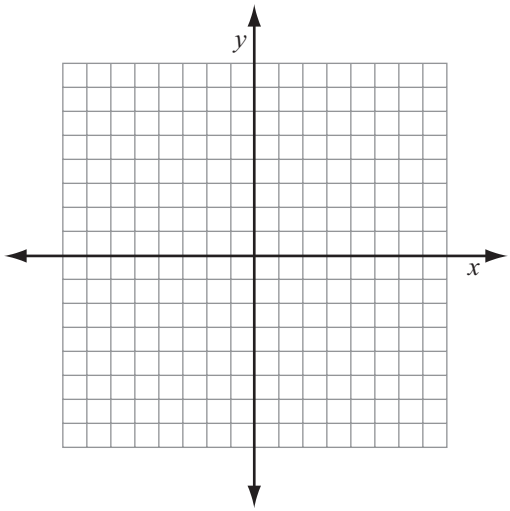
A. $t = \frac{f+s}{10}$

B. $t = \frac{10}{f+s}$

C. $t = \frac{f \cdot s}{10}$

D. $t = \frac{10}{f \cdot s}$

You may use the grid below to answer question 55.



55. Jamal located the point (2, 6). Using this point as a vertex, he drew a rectangle that measured 3 units by 5 units. Which point could be the location of the opposite corner of the rectangle?

A. (–1, 1)
B. (–3, 1)
C. (–1, 3)
D. (1, –1)

Please go on to the next page.

56. Jack is a carpet cleaner. He uses the equation $c = 0.50f$ to calculate how much to charge, c, to clean f square feet of carpet. He has two different carpet cleaning jobs today. He will clean 1000 square feet at the first job and 4000 square feet at the second job. How do the costs for the two jobs compare?

A. The cost for the second job is 2 times the cost of the first job.

B. The cost for the second job is 4 times the cost of the first job.

C. The cost for the second job is 6 times the cost of the first job.

D. The cost for the second job is 8 times the cost of the first job.

57. There are six seniors on the girls' basketball team. Each year, the team votes for two seniors to co-captain the team. How many different co-captain pairs are possible?

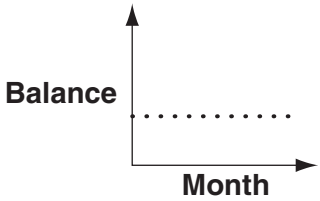
A. 12

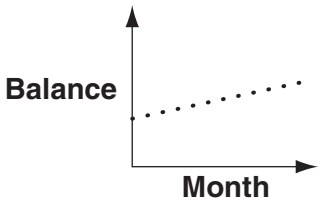
B. 15

C. 18

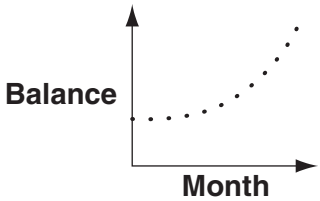
D. 30

58. One year ago, Janet had $50 in her savings account. She put the same amount of money in the account each month. Her balance is now three times the amount she had when she started. Which graph represents the amount of money in her savings account over the last year?

A. 

B. 

C.

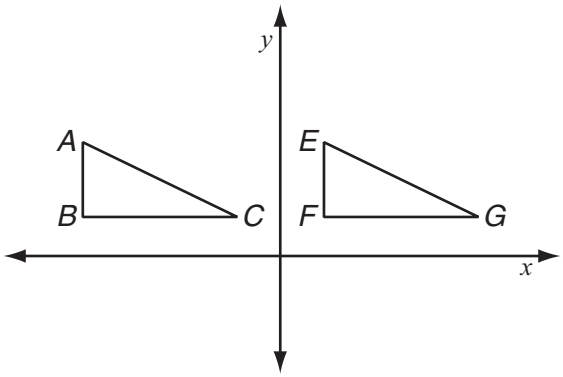
D. 

Please go on to the next page.

59. The national debt for the United States is approximately \$2.4 trillion. What is 2.4 trillion in standard form?

A. 2,000,000,000,000.4
B. 2,000,000,000,004
C. 2,400,000,000,000
D. 24,000,000,000,000

Use the graph below to answer question 60.



60. Triangle *EFG* is the image of triangle *ABC*. What transformation created the image?

A. a reflection across the *x*-axis
B. a reflection across the *y*-axis
C. a translation across the *x*-axis
D. a translation across the *y*-axis

61. Lea wants to buy a new stereo that costs \$100. She has put together this plan to save the money she needs.

Month	Money Saved
Starting Balance	\$ 50.00
1	\$ 60.00
2	\$ 70.00
3	\$ 80.00
4	\$ 90.00
5	\$100.00

Which equation represents how much money, *s*, Lea will have saved after *m* months?

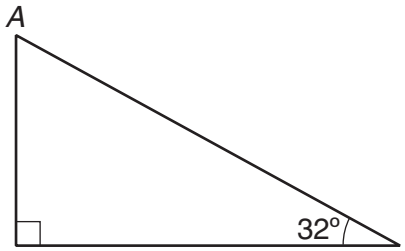
A. $s = 50m$
B. $s = 60m$
C. $s = 50 + 10m$
D. $s = 10 + 50m$

62. An item at a store is marked 45% off. What percent of the original price will the item cost?

A. 0.55%
B. 45%
C. 55%
D. It depends on the original price of the item.

Please go on to the next page.

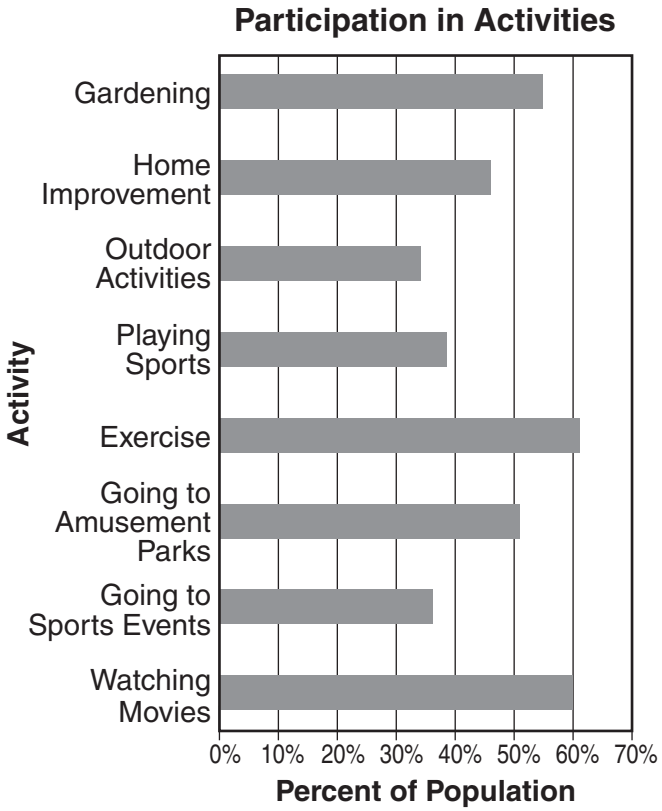
63. Lowell is building the ramp shown below.



The ramp incline is 32°. What is the measure of angle *A*?

A. 32°
B. 58°
C. 90°
D. 148°

64. The table below shows the results of a survey held to determine the percent of the population that participates in certain activities in a town.



Based on these data, which statement is true?

A. More than half of the town's population go to amusement parks.
B. Gardening is popular with all different age groups.
C. Going to sporting events costs more than going to an amusement park.
D. Almost half of the homes in the United States need improvement.

Please go on to the next page.

Write your answers to questions 65 through 67 in the spaces provided in your Student Response Booklet. Show all of your work.

65. What is the value of this expression?

$$2\left(\frac{8}{23} \times \frac{23}{8}\right) - \frac{15}{15}$$

Show all of your work.

66. State police use this equation to calculate the stopping distance, d, in feet, of a car traveling s miles per hour.

$$d = \left(s + s^2\right) \div 20$$

A man in a collision with a deer claims that he had been traveling 30 miles per hour just before the collision occurred. If he is correct, what would have been his stopping distance?

Show all of your work.

67. What is the value of this expression?

$$3 \times 6 - 4 + 8 \div 2$$

Show all of your work.

Please go on to the next page.

Write your answer to question 68 in the space provided for it in your Student Response Booklet. Show all of your work.

68. Mr. Brady and Mrs. Johnson have a total of 60 boys and 48 girls in their physical education classes. The teachers want to combine the classes, and then use these three rules to divide the students into smaller groups.

    - Each group must contain both boys and girls.
    - There must be an equal number of girls in each group.
    - There must be an equal number of boys in each group.

    a. Separate the students in three different ways using the rules above. For **each** of your three ways, be sure to tell how many boys and how many girls would be in each group and how many groups there would be. Show all of your work.

    b. Is it possible to use the three rules to split the students into 5 groups? Explain your answer.

Please STOP. STOP